WHAT IS CLAIMED IS:

1. A routing control method in an optical packet switching network including a plurality of optical packet switches, each optical packet switch having a plurality of output ports used for sending packets to other optical packet switches, respectively, said method comprising the steps of:

in a one optical packet switch, monitoring congestion conditions at its output ports;

in said one optical packet switch, transferring packets to be stored in a one output port that is judged in said monitoring step as in congestion, to other output port that is judged in said monitoring step as not in congestion;

from said one optical packet switch, sending the packets as reflection packets via said other output port to an other optical packet switch corresponding to said other output port; and

from said other optical packet switch, returning said reflection packets to said one optical packet switch.

2. The method as claimed in claim 1, wherein said transferring step comprises selecting said other output port from output ports judged in said monitoring step as not in congestion so as to provide a reflection route with the shortest transmission delay time.

3. The method as claimed in claim 1, wherein said transferring step comprises selecting said other output port in random from output ports judged in said monitoring step as not in congestion so as to provide reflection routes with transmission delay times within a predetermined range.

4. The method as claimed in claim 1, wherein said transferring step comprises sequentially selecting said other output port from output ports judged in said monitoring step as not in congestion so as to provide reflection routes with transmission delay times within a predetermined range.

5. The method as claimed in claim 1, wherein said method further comprises a step of storing the reflection packets returned from said other optical packet switch to said one output port if it is judged in said monitoring step that this one output port is not in congestion.

6. The method as claimed in claim 1, wherein said method further comprises a step of storing the reflection packets returned from said other optical packet switch to other output port that is judged in said monitoring step as not in congestion if it is judged in said monitoring step that said one output port is in congestion, and wherein said sending step and returning step are repeatedly performed.

7. The method as claimed in claim 1, wherein said method further comprises a step of sending the reflection packets returned from said other optical packet switch earlier than packets stored in said one output port.

8. The method as claimed in claim 1, wherein said method further comprises a step of counting the number of reflection and a step of abandoning packets when a counted number reaches a predetermined number.

9. A routing control method in an optical packet switching network including at least first, second and third optical packet switches, said method comprising the steps of:

in said first optical packet switch, when a first output port used for sending optical packets to said second optical packet switch is in congestion and a second output port used for sending optical packets to said third optical packet switch is not in congestion, sending optical packets to be sent to said second optical packet switch to said third optical packet switch via said second output port as reflection packets;

in said third optical packet switch, returning the reflection packets received from said first optical packet switch to said first optical packet switch; and

in said first optical packet switch, when said first output port is not in congestion, sending the reflection packets to said second optical packet switch via said first output port.

10. The method as claimed in claim 9, wherein said method further comprises, in said first optical packet switch, monitoring congestion conditions at said first and second output ports.

11. The method as claimed in claim 9, wherein said sending step comprises selecting said second output port so as to provide a reflection route with the shortest transmission delay time.

12. The method as claimed in claim 9, wherein said sending step comprises selecting said second output port in random so as to provide reflection routes with transmission delay times within a predetermined range.

13. The method as claimed in claim 9, wherein said sending step comprises sequentially selecting said second output port so as to provide reflection routes with transmission delay times within a predetermined range.

14. The method as claimed in claim 9, wherein said method further comprises a step of storing the reflection packets returned from said third optical packet switch to said second output port if said first output port is in congestion, and wherein said reflection packets sending step and returning step are repeatedly performed.

15. The method as claimed in claim 9, wherein said method further comprises a step of sending the reflection packets returned from said third optical packet switch earlier than packets stored in said first output port.

16. The method as claimed in claim 9, wherein said method further comprises a step of counting the number of reflection and a step of abandoning packets when a counted number reaches a predetermined number.

17. An optical packet switch comprising:

a plurality of output ports used for sending packets to other optical packet switches;

means for monitoring congestion conditions at said output ports;

means for transferring packets to be stored in a one output port that is judged by said monitoring means as in congestion, to other output port that is judged by said

monitoring means as not in congestion;

means for sending the packets as reflection packets via said other output port to other optical packet switch corresponding to said other output port; and

means for returning reflection packets to other optical packet switch that sent these reflection packets.